Questions & Answers on Reproductive Tract Infections and Sexually Transmitted Infections

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Questions and Answers on

Reproductive Tract Infections and Sexually Transmitted Infections

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INTRODUCTION

"Sexual relations and reproductive events should be free from infection."

— Christopher Elias

Until recently, reproductive tract infections (RTIs), including sexually transmitted infections (STIs) were not recognized as a problem. Research conducted in India over the last few years to document the reproductive health needs of its people has contributed to making these infections visible and bringing them on to the public health agenda. Concern about the spread of the HIV epidemic, and recognition of the role that STIs play in HIV transmission, have also drawn attention to the problem.

The agenda presented at the International Conference on Population and Development in Cairo in September 1994 as now been accepted. India has taken a lead to begin the process of translating the concepts enunciated in Cairo into its national programme. The first major step that the government took was to remove contraceptive targets as of April 1996. There is now a move towards decentralizing health and family welfare programmes, and towards developing good quality services in a reproductive health approach. The Reproductive and Child Health Programme was officially launched on October 15, 1997. Services for the prevention and treatment of RTIs are an integral part of this programme.

This booklet has been prepared for the use of programme managers who will take a lead at district and local level in planning, implementing and evaluating RTI services within the Reproductive and Child Health approach. It attempts to answer some common questions that are posed about RTIs by programme managers and service providers. Basic information about RTIs and sources for further reading are also provided.

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"Prevent and reduce the spread of reproductive tract infections (RTIs) and sexually transmitted infections (STIs) including HIV/AIDS, and provide treatment for STIs and their complications, such as infertility, with special attention to increasing the ability of girls and women to protect themselves."

— ICPD Program of Action

What are RTIs and STIs?

RTIs include a variety of bacterial, viral, and protozoal infections of the lower and upper reproductive tract of both sexes. Many RTIs are sexually transmitted.

Though most STIs are RTIs, some STIs, such as syphilis, hepatitis B and AIDS, are also systemic diseases. Many STIs also affect the mouth, rectum, and urinary tract, the latter being part of the reproductive tract in males but not in females.

Female RTIs originate in the lower reproductive tract (external genitals, vagina, and cervix) and, in the absence of early treatment, they can spread to the upper tract (uterus, fallopian tubes and ovaries). Infections can ascend from the lower to the upper tract spontaneously to cause pelvic inflammatory disease (PID), but the risks of upper tract infection rise dramatically during procedures such as IUD insertion, abortion, and childbirth when instruments are introduced through the cervix.

Reproductive tract infections (RTIs) pose grave threats to women's lives throughout the world. RTIs include sexually transmitted infections (STIs); infections related to procedures such as unsafe deliveries and abortion or IUD insertion; and infections due to overgrowth of organisms normally found in the genital tract. Men also experience RTIs, particularly STIs, but the prevalence and the consequences for women are much more severe.

Source: Mueller and Wasserheit, 1991

What are the common causes of these infections?

RTIs are comprised of:

(a) iatrogenic infections, which are related to inadequate medical procedures, such as unsafe abortions,

(b) endogenous infections, which may be associated with inadequate personal, sexual and menstrual hygiene practices, and

(c) sexually transmitted infections (STIs).

The major determinants and pathways of RTIs in the Indian context have not yet been investigated in detail. In particular, it is not clear what is the contribution of personal, sexual and menstrual hygiene practices. However, it is clear that iatrogenic infections do occur, and medical personnel have a responsibility to make sure that medical procedures, such as deliveries, insertions of IUDs, sterilizations, and medical termination of pregnancy, are conducted under safe and sterile conditions and do not lead to RTIs.

How common are RTIs and STIs in India?

All community-based prevalence studies of women and men's health that have now been conducted in India indicate that rates of RTIs are very high. For example in a study conducted among women in two villages in Maharashtra, the prevalence of clinically-diagnosed RTIs was 46%. In other studies conducted in four different sites (rural West Bengal and Gujarat, and urban Baroda and Bombay), the prevalence of such infections ranged from 19% to 71%. Finally, in a study conducted in rural Karnataka, over 70% of women had clinical or laboratory evidence of RTIs. Many of the women in these studies had

signs or symptoms. For example, in the Karnataka study, 38% of women complained of excessive vaginal discharge or abdominal pain.

Men suffer from RTIs as well. A study of male reproductive morbidity conducted in rural Maharashtra suggests that a substantial proportion of men have problems such as urethritis, and genital skin infections.

Some of these RTIs are sexually transmitted. For example, in the Karnataka study, evidence of an STI was found in 10% of all women. Based on a number of community-based and facility-based studies and a review of the scientific literature, the annual incidence of STIs in India is estimated at 5%, which indicates that approximately 40 million new infections occur every year.

Marked variation has been found across the studies that have been conducted so far in terms of patterns and levels of morbidity. It is plausible that innate differences exist across population groups and that no single set of estimates for RTIs and STIs could apply in such a large and diverse country as India. However, it is also the case that fundamental differences exist across studies with respect to study designs and research methods. Nonetheless, collectively these studies leave little doubt that morbidity levels associated with RTIs, including STIs, are unacceptably high, and constitute a major public health problem among poor Indian women and men.

What are the possible consequences on people's health?

RTIs and STIs represent a serious threat to the health and well-being of Indian women and men. They are exposed to the pain and discomfort of acute illness, and often experience long-term impairment of their reproductive function as a consequence of these infections. Some complications, such as infertility, are a source of psychological distress and family disruption. Others, such as ectopic pregnancy and cervical cancer, represent a significant source of mortality. Some infections may also cause fetal death or affect child survival by causing pre-term deliveries of low birthweight infants, or by infecting newborns during delivery. RTIs and STIs are therefore responsible for a large amount of female, male and infant morbidity and mortality and form an enormous public health burden in India.

Relationship of RTIs, STIs and HIV infection

The relationship between STI and HIV infection is threefold. First, STI and HIV infection are associated with the same risk behaviours, that is unprotected sexual intercourse with multiple partners. Thus, the same measures that prevent STI also prevent sexual transmission of HIV infection.

Secondly, the presence of STI has been found to facilitate the acquisition and transmission of HIV infection. A 10-fold increased risk for HIV transmission has been associated with infections that cause genital ulcers, such as syphilis, chancroid and herpes. The risk associated with diseases causing discharge, especially Gonorrhea, chlamydial infection, trichomoniasis and bacterial vaginosis, is up to 4-fold. Thus, early diagnosis and effective treatment of RTI can contribute significantly to a reduction in HIV transmission.

Lastly, there is mounting evidence that some RTI pathogens are more virulent in the presence of HIV related immune-deficiency. This might have consequences for treatment recommendations for RTI, although more studies need to be carried out before changes can be proposed.

Source: Mueller and Wasserheit, 1991.

Women's Perceptions of Vaginal Discharge: Rural Maharashtra

When 30 men and 32 women, in a survey held in rural Maharashtra, were asked to list all women's health problems that they could think of, 95% mentioned white discharge. They had twelve different terms for white discharge and they classified the illness into five main types, each with a distinct characteristic and a different significance.

- The colour, consistency and the smell of the discharge.
- Gender of the person with the discharge.
- Presence or absence of the discharge in the urine.
- Perceived cause.
- Severity.

This intricate classification and the variety of the terms used indicate the perceived importance, the significance, local observation and thinking on white discharge.

The women reported several different ways of recognising white discharge:

- The underclothes getting wet or stained or starched.
- Passing white, sticky discharge while urinating.
- An unpleasant smell on the underclothes and the body.
- A sensation of white discharge bubbling out.
- Whiteness of urine.
- Weakness – either as cause or effect.

The term 'weakness' carries a wider connotation than is recognised by most medical practitioners. The term commonly used by women to vocalise any health problem is 'weakness'. This is generally described as a kind of 'looseness' in the body, a 'slackness' in the vagina, a loss of energy, giddiness, dizziness, tingling or numbness in the legs, pain in the calf muscles, backache, lethargy, anxiety and mental tension, aches and pains in the body, tiredness in the eyes and diminished vision. 'Weakness' evidently appears to be a generic term encompassing any and all symptoms of physical, mental and sexual discomfort and hence carries a wider meaning than is generally grasped by most allopathic health professionals.

All the women interviewed felt that the most common cause for white discharge was excessive heat bursting out from inside the body. Excessive heat may be caused by inherent body constitution. White discharge is also thought to be a disease of the uterus. Many believe that sores develop in the uterus, which burst open and the pus drains out in the form of white discharge. These women had their own perception of the causes for white discharge, perceptions far removed from reality.

All women interviewed agreed that white discharge meant certain death. But only a few had gone to the modern medical care system for treatment of gynaecological diseases.

Source: Pachauri et al, 1994

How does the occurrence of these infections influence the transmission of HIV?

Both HIV and other STIs are associated with high risk sexual behaviour. Thus the high level of STIs in India indicates the potential for rapid and extensive spread of the AIDS epidemic. There is also evidence that the sexual transmission of HIV is facilitated by the presence of other STIs and some RTIs. Therefore, the control and prevention of RTIs and especially STIs, is one of the foremost strategies for preventing HIV in India. A study conducted in rural Tanzania demonstrated the impact of this approach. That study showed that a programme to provide appropriate case management of STIs at the primary health care level was successful in reducing the incidence of HIV by about 40%.

How are these infections perceived in the community?

It is clear that RTIs, in their various manifestations, represent a salient concern for poor Indian women. Research indicates that women have at least one (and sometimes more) term for "white discharge", and that "white discharge" is a major complaint of women from both urban and rural areas. "White discharge" is commonly linked with other key health problems of women, and may be expressed as weakness or backache. Similarly, "white discharge in urine" has been ranked by men in some communities as one of the most serious complaints of males, more serious than complaints of other systems of the body.

Yet, access of Indian men and especially women to non-stigmatizing sexual and reproductive health care services is severely restricted. Until recently, treatment for STI services were included as part of the public sector health services, but they were only available at higher levels of the health system. In fact, there is evidence that the public health sector is not the preferred source of mobile, curative care. Private providers are the major source of such care at the community level, for both the poor and the better off. However, the quality of care available in the private sector, at least for the treatment of RTIs and STIs, is inadequate. There is no doubt that there is a substantial unmet need among both women and men for reproductive health services.

What needs to be done?

The challenge is now to develop and rapidly expand RTI/STI control programmes in order to reduce the burden of illness and death associated with these infections. A comprehensive RTI/STI control programme requires three levels of action:

1. Primary prevention of RTIs

2. Secondary prevention (identification and treatment)

3. Tertiary prevention, minimizing the impact of complications of infection. The main components of tertiary prevention are clinical management of septic abortion, alarm and transport for ectopic pregnancies, the management of infertility and cervical cancer screening.

The Reproductive and Child Health Programme provides a framework for the required programme activities. It focuses on improving the quality of the services provided by health systems, and would include implementing an essential nationwide package for the prevention and management of RTIs and STIs. It is recommended that initially case-management services should be provided to symptomatic women, but that, depending on the availability of simple diagnostic tools, these services should also be extended to asymptomatic women.

Strategies for Primary Prevention of RTIs

Type of Infection	Prevention Strategy
Sexually Transmitted	Delaying sexual initiation (coital debut) Reducing number of sexual partners or rate of partner change Changing the dynamics of partner selection Reducing nonconsensual sexual exposure Encouraging safer sexual practices Promoting condom use Providing voluntary counseling and testing Promoting use of other barrier methods Encouraging penile hygiene*
Endogenous	Improving knowledge of reproductive physiology and menstrual and personal hygiene Promoting appropriate help-seeking behaviour Reducing the use of harmful intravaginal substances (i.e. douches and desiccants)
Iatrogenic	Reducing the inappropriate use of systemic antibiotics Improving access to safe delivery and abortion services Improving infection control competence Enhancing the management of service delivery (quality of care) Providing antibiotic prophylactically*

* Evidence of effectiveness is weaker than for other strategies.

Source: Christopher Elias, 1997.

Strategies for Secondary Prevention (Identification and Treatment) of RTIs

Kind of Identification or Treatment	Strategy
Management of symptomatic infections	Standardized case management Encouraging prompt care seeking Improving treatment adherence Encouraging abstinence during treatment Clinic-based counselling for prevention
Screening for asymptomatic infections	Serologic screening Urine, pelvic exam* Case finding, especially for cervical infections (e.g., Gonorrhea and chlamydia) Partner notification and referral
Mass treatment	Prophylaxis for neonatal gonococcal ophthalmia "Epidemiologic" treatment of core transmitters and communities with high rates of RTI prevalence

* Evidence of effectiveness is weaker than for other strategies.

ibid. 1997

COMMON REPRODUCTIVE TRACT INFECTIONS

Genital Ulcers and Other Lesions

Syphilis is declining in some countries but increasing in others. The primary and most infectious stage consists of painless ulcers that are often unnoticed by women. If untreated, the disease proceeds to a secondary stage of generalized infection, followed by a prolonged stage with few symptoms. In pregnant women, early stages of syphilis can result in intrauterine growth retardation, premature birth, stillbirth and congenital infection of the infant.

Genital herpes, caused by the herpes simplex virus, produces painful genital ulcers that heal spontaneously but recur, the initial outbreak being the longest and most intense. Although there is no medical cure yet, symptoms can usually be controlled with therapy. Herpes is most infectious when sores are open, but the disease can also be spread to sexual partners by individuals who are not aware of any symptoms. Although childbirth during an active outbreak of a mother's primary infection is rare, 20-25 percent of babies born under these circumstances will be infected at sites such as the eyes, skin, mouth, central nervous system or lungs. The majority of infants with infections extending beyond the skin, eyes, and mouth will suffer permanent neurological damage or death.

Chancroid occurs frequently in developing countries. While this disease usually causes a painful ulcer in men, it may occur without symptoms in women. As with other genital lesions, chancroid appears to increase the risk of HIV transmission.

Genital warts are small painless growths caused by the human papillomavirus (HPV), and may be the most common viral STI in industrialized countries. The precise prevalence of HPV infections is unknown, however, because most HPV infections are asymptomatic. These infections are difficult to treat and recurrent infections are common. Preliminary data have established a link between genital warts and HIV infection. Several of the over 50 types of HPV appear to be associated with increased risk of cervical cancer.

Vaginal Infections

Bacterial vaginosis (BV) is probably the most common of all vaginal infections. It can occur without symptoms, or be accompanied by excessive vaginal discharge that has an unpleasant odour. The organisms causing BV are normally found in low numbers in the vagina. BV results from their rapid multiplication due to a variety of factors that upset the normal balance of bacteria in the vagina. BV may cause upper tract infections. In pregnant women, this may lead to the birth of a premature infant; in non-pregnant women, infertility or tubal pregnancy may result.

Candidiasis, like BV, results from overgrowth of normal vaginal flora. Symptoms include vaginal discharge, irritation, and vaginal itching, although no long-term or severe complications result. Candidiasis is a common infection,

Upper Reproduc

Pelvic inflammatory disease (PID) consists of infections of the uterus, fallopian tubes, and ovaries. Although PID can occur without significant pain, symptoms usually include abdominal pain and abnormal vaginal discharge. Acute cases may require hospitalization. The spread to the upper reproductive tract of gonococcal and chlamydial infections and of bacterial vaginosis organisms is often facilitated by IUD insertion, unsafe abortion or childbirth. PID can cause severe inflammation and scarring of the fallopian tubes and ovaries, and damage increases with the severity of inflammation and with each recurrent episode.

Long-term consequences of PID include infertility, potentially fatal tubal pregnancy, chronic pelvic pain, and recurrent bouts of upper tract infection. Upper tract infections during pregnancy raise the possibility that a fetus will abort

occurring among 11-25 percent of women tested in 17 studies conducted in developing countries. Pregnant women and women taking antibiotics are especially vulnerable.

Trichomoniasis, a very common STI, may be associated with profuse discharge, burning during urination, bad odor or, occasionally, lower abdominal pain. Preliminary studies show an association with increased risk of HIV transmission.

Bacterial vaginosis, candidiasis and trichomoniasis are all treatable infections.

Cervical Infections

Chlamydia, the most common bacterial STI in some industrialized countries, is particularly difficult to control for three reasons. First, the majority of women with chlamydial cervicitis have no symptoms so they rarely seek care. Second, accurate tests for chlamydia are technically demanding and expensive. Finally, at least a week of therapy is required to eradicate lower tract chlamydial infection, in contrast to the single dose regimens available for many other bacterial STIs.

Chlamydia can lead to extremely serious complications. Infection in the upper tract frequently causes infertility. During pregnancy, chlamydia may cause stillbirth, premature birth, and congenital infections such as pneumonia or eye infections. It also appears to be associated with an increased risk of HIV transmission.

Gonorrhea is believed to be the most common preventable cause of PID and tubal infertility worldwide. It is spread easily: a man's risk of acquiring the disease in a single heterosexual encounter with an infected partner is approximately 20-25 percent, while a woman's risk is probably higher because infected secretions from the male are retained in the vagina following intercourse. In women, symptoms of cervical infection can include abnormal vaginal discharge and burning during urination; upper tract infection may be associated with lower abdominal pain and abnormal menstruation; and a blood-borne phase of infection may be manifested by rash and painful joints. Cervical gonorrhea is, however, asymptomatic in at least 20-50 percent of women. Gonorrhea can produce spontaneous abortion, prematurity, and potentially blinding eye infections in newborns. Preliminary data now link gonorrhea with an increased risk of HIV transmission. Although gonorrhea can be treated with antibiotics, an increasing number of strains are resistant to those antibiotic medications most readily available in the developing world.

Cervical cancer, although not an infection, appears to be causally related to lower tract infections from some subtypes of HPV which also cause genital warts. About half a million new cases are diagnosed each year worldwide, more than three-quarters of which are found in developing countries.

— Source: Mueller and Wasserheit, 1991

ract Infections

spontaneously or that an infant will be born too soon and too small.

RTIs resulting in blockage of the fallopian tubes are the major preventable cause of female infertility in developing countries. About 15-25 percent of women who develop PID become permanently infertile because of tubal scarring following infection. Before the advent of antibiotics, infertility rates as high as 60-70 percent were noted following PID. Although men may be responsible for up to one-third of all cases of infertility in many developing countries, the blame most often falls on women. A vicious cycle may occur in which STIs introduced by the husband's extramarital contacts result in a wife's post-infectious infertility. He then abandons her, infects other women, and she may turn to prostitution as the only means of supporting herself.

— Source: Mueller and Wasserheit, 1991

What is involved in the case management of RTIs and STIs?

Comprehensive case management of RTIs/STIs is the cornerstone of control programmes. Prompt and effective case detection and treatment result in immediate health benefits for individual patients. Curative services offer unique opportunities for health education, including the promotion of condom use for those at greatest risk of acquiring STIs and HIV infection. Finally, it is possible to detect and treat asymptomatic STIs by identifying the sexual partners of patients and offering them services.

Currently there are no simple, inexpensive and reliable diagnostic methods available for identifying most RTIs or STIs. The full range of laboratory tests to identify these infections is not used in most settings because many tests are of limited availability, low technical feasibility, or high cost. In particular, tests for the identification of *Chlamydia trachomatis* are only available in a few research settings and are very expensive. In resource-poor settings, therefore, the syndromic approach is recommended for the management of RTIs/STIs. The syndromic approach allows health care workers to make a diagnosis without sophisticated laboratory tests.

This approach is based on identifying a syndrome – a group of symptoms and easily recognised signs – associated with a number of well-defined etiologies. Once a syndrome has been identified, treatment can be provided for the majority of the organisms responsible for that syndrome. Several syndromes can be managed easily and rapidly using clinical flowcharts for diagnosis and treatment. Clinical flowcharts (also known as algorithms or decision trees) rationalize and standardize clinical decision-making. Their use can also standardize diagnosis, treatment and referral.

Such standardization:

- makes reports from different health facilities comparable;
- simplifies data collection and analysis, which in turn facilitates surveillance and planning (e.g., the purchase of drugs and other supplies);
- facilitates supervision of health care workers because the approach is the same in every health facility;
- ensures that patients receive the same treatment for a given condition in every health facility, enhancing confidence in health services;
- delays the development of antimicrobial resistance of organisms responsible for RTIs/STIs.

How well do specific flow charts perform in the management of RTIs?

The National AIDS Control Organization has provided guidelines for the use of flow charts to manage RTIs/STIs (*see flow chart on facing page*). Further research is ongoing to examine the performance of these flow charts in different settings, and, if necessary, to improve them in the future. On the one hand, flow charts have now been developed which have been shown to be sensitive and cost-effective in most settings in dealing with persons who present with urethral discharge and genital ulcer disease. On the other hand, there are still some difficulties with the assessment of vaginal discharge, as clinical findings are poor indicators of upper genital tract infections, which are of most concern from a morbidity and HIV transmission perspective but that often remain asymptomatic.

VAGINAL DISCHARGE
WITH SPECULUM, NO MICROSCOPY

Client Complains of Vaginal Discharge

Partner Symptomatic ?

YES — Speculum examination

Mucopus from cervix	Curd-like discharge	Other abnormal discharge	No abnormal discharge
Treat for	Treat for	Treat for	Treat for
gonorrhea, and chlamydia	gonorrhea, chlamydia and candidiasis	gonorrhea, chlamydia, trichomoniasis and bacterial vaginosis	gonorrhea and chlamydia

NO — Speculum examination

Mucopus from cervix	Curd-like discharge	Other abnormal discharge	No abnormal discharge
Treat for	Treat for	Treat for	Treat for
gonorrhea, and chlamydia	candidiasis	trichomoniasis and bacterial vaginosis	No treatment

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Generally, it is best to use flow charts for the management of vaginal discharge that include a per speculum examination, as this improves the ability to predict upper genital tract infections. Flowcharts that include cheap and simple laboratory tests such as measurements of vaginal pH, saline wet mounts of vaginal fluids and gram stains of smears of such fluids may perform even better. Wet mounts and gram stains, however, presuppose the availability of a microscope, laboratory supplies and laboratory technicians, which are not available at all levels of the health service. Another problem is that the predictive value of flow charts is highly sensitive to the prevalence rate of the infection of interest in the setting in which it is used. Therefore, a flow chart which performs well in sexually transmitted disease clinic settings, may not be as helpful in another setting where the prevalence of infections is lower, and lead to a high level of overtreatment. The results of ongoing research should help to refine this approach in the future. However, in the meantime, there is general agreement that the syndromic approach using recommended flow charts offers the best alternative, as the currently used variable approaches to diagnosis and treatment are unlikely to be as cost-effective.

What are the key approaches to promote specific recommendations for promotion of infection-free reproductive health?

1. All clinic staff need to be well-informed so that they can answer their clients' basic questions. In this respect, it is important that staff learn to work through any fears they may have about AIDS or any judgmental attitudes they may harbor toward people with STIs. This will enable them to respond accurately and with sensitivity to those who may be infected or at the risk of becoming infected.

2. Clinic staff also should be aware of the symptoms of RTIs so that even if diagnosis and treatment are not available on site, their knowledge can be taken into account when considering the method of family planning most appropriate for each client.

3. Family planning programs should also consider clients' risk of exposure to RTIs/STIs in determining protocols for providing various contraceptive methods. Barrier methods, particularly condoms, could be a better option for some clients despite being considered "less effective" contraceptive methods. For some clients, the secondary benefits of RTI/STI prevention may be as important as the primary benefit of contraception.

4. Programs should have well-designed informational materials dealing with RTIs, STIs and HIV/AIDS available for staff and clients. For example, simple, pictorial instructions on how to correctly use and dispose of condoms are essential. All health staff cannot assume that people know how to use condoms. Many do not, and embarrassment about such ineptitude has been shown in some studies to be a major reason why some people at risk still do not use condoms.

5. Program managers should encourage provision of basic RTI treatment services in clinics whenever possible. If services cannot be offered on site, providers should make the effort to learn which assessment and treatment services for RTIs, STIs and HIV/AIDS are available in their area and refer clients to these services as appropriate. Clinical and community-based distribution programs should have ample condom supplies for distribution to clients. Moreover, clients should be re-supplied as quickly, efficiently, and as unobtrusively as possible.

6. The establishment and monitoring of infection prevention standards for clinical services could be seen as a "sentinel" intervention. Infection prevention, consisting of simple measures such as hand washing, appropriate use of gloves, and adequate sterilization of instruments should be a minimum standard for all service delivery. Monitoring services for lapses in infection prevention practices will allow program managers to identify gaps in provider training and motivation, interruptions in supply and logistics systems, and difficulties in coordination between different service elements. If basic infection prevention practices cannot be ensured, it is unlikely that other, more complicated interventions for RTI prevention or treatment will succeed.

7. Another urgent need is to expand the range of clients served by reproductive health programs. Adolescents, men, and the current users of traditional and informal sector services are examples of groups not reached through current programs. There is also a need to work with private sector services to improve the quality of their efforts to prevent and treat RTIs. Expanding services may require relaxing some of the current restrictions on nonphysician providers and changing some cultural assumptions regarding the presumed sexual abstinence of certain groups of women.

— Christopher Elias, 1997

What is the relationship between RTIs/STIs and acceptance of contraceptive methods?

Family planning programs may have difficulty in persuading clients to accept or continue contraceptive methods in settings where RTI-related infertility or pregnancy loss is common. Many studies have shown that the most common reason women give for discontinuing a contraceptive method is the perception or fear of a side effect. Regardless of whether there is a relationship, users often attribute any symptom, particularly any reproductive tract symptom, to their method of contraception. In addition, once a method is initiated, they are more likely to report a symptom that has previously gone unnoticed. In the absence of accurate diagnosis and effective education and treatment, it is far easier for a woman to blame her vaginal discharge on her contraceptive method than consider the possibility of her husband's infidelity.

Some contraceptive methods increase the likelihood of a woman contracting an RTI while others lower it. Family planning providers need to know about these differences.

Latex condoms reduce the risk of contracting Gonorrhea, syphilis, and other bacterial and viral STIs such as chlamydia. In a test tube, commonly used spermicides can kill most organisms that cause STIs, especially those causing Gonorrhea and chlamydia, but their effectiveness in vaginal use among different populations is not well-established. Barrier methods and spermicides may offer some protection against cervical cancer.

Oral contraceptives provide no protection against lower tract RTIs. They may increase slightly the risk of candidiasis, chlamydia, and genital warts, but only marginally reduce the risk of PID and the severity of tubal inflammation. Long-acting progestins such as injectables and implants may also help prevent PID, but few data are available. Hormonal methods help protect against uterine and ovarian cancer.

IUDs increase the risk of bacterial vaginosis. IUD users are also about two to five times more likely to develop PID than women not using a contraceptive method. Risks are highest

The Effects of Contraceptives on Bacterial and Viral STIs:

Contraceptive Method	Bacterial STI	Viral STI
Condoms (male and female)	Protective	Protective
Spermicides	Protective against cervical Gonorrhea and chlamydia	Undetermined in vivo
Diaphragms	Protective against cervical Gonorrhea and chlamydia Associated with vaginal anaerobic overgrowth	Not protective
Hormonal	Perhaps associated with increased cervical chlamydia Protective against symptomatic PID	Not protective
IUD	Associated with PID in first month after insertion (and perhaps thereafter) among women at risk of STIs	Not protective
Natural Family Planning	Not protective	Not protective

Source: Ward Cates (1996)

for women who have never had a child, are exposed to STIs, have multiple partners, or have had an IUD inserted during the prior three months. A history of PID and the presence of cervical infection are contraindication to IUD use.

Abortion and deliveries performed in the presence of underlying RTIs or with unclean hands or instruments place women at increased risk of infections and sepsis.

— *Recommendations for updating selected practices in contraceptive use, 1996*

When should women or couples be advised to use dual methods for protection against STIs and pregnancy?

Decisions about contraceptives should reflect both the need to prevent STIs and the need to prevent unwanted pregnancies. To date, the methods most effective at preventing STIs – barrier methods – may not necessarily be the most effective contraceptives. Combining a barrier method with a more effective contraceptive can maximize the dual

protective effect. Yet, dual method use is relatively new, and is not appropriate for all clients. Choosing when to promote dual method use can be difficult, especially since it requires more counseling and places greater demands on each client. Providers have a responsibility to help clients decide which method or methods to use in light of this dilemma between pregnancy prevention and disease prevention. Providers will have to evaluate the dual needs of each client to assist them in making a safe and appropriate recommendation.

- A needs assessment can identify populations at risk and STI/HIV prevalence rates for a geographical area, to help providers understand how much STI risk their clients generally face.

- Clients who consider themselves or their partners at high risk of HIV and other STIs are good candidates for dual method use.

- Some clients may be able to achieve protection against both STIs and pregnancy using a barrier method alone. Motivated clients might safely use male condoms alone, because condoms are very effective at both disease and pregnancy prevention when used correctly and consistently.

- For women at risk of STIs who cannot persuade their male partners to use a male condom, increased availability of spermicides, the female condom or the diaphragm with spermicide can be used for both STI protection and contraception.

- Regardless of her history, a woman should always be informed if the contraceptive method she is using does NOT protect her against STIs. If she is ever in a situation where she suspects she may be at risk (e.g. her husband has other sexual partners), she should immediately start using additional protection.

— Recommendations for updating selected practices in contraceptive use, 1996

Conclusion

This booklet has presented information which emphasizes the magnitude of the burden of RTIs and their consequences on the sexual and reproductive lives of Indian men and women. Services for the prevention and treatment of RTIs are critically needed. The implementation of these services at the local level will undoubtedly raise many challenges. The benefits, however, will be tremendous.

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